LETTER TO THE EDITOR

Epidermal Calmodulin Levels in Psoriasis

To the Editor:

In 1984 we reported in a brief communication (Vol 82, pp 298–299) that the levels of biologically active calmodulin were significantly elevated in both the psoriatic plaque and the uninvolved epidermis of 16 patients with psoriasis compared to normal volunteers. In expanding this study we have found that the Bradford protein assay (Bradford, 1976) which we used was giving underestimates of the amount of protein present in epidermal homogenates as determined by the Lowry protein assay (Lowry et al, 1951). (We are not aware of any such consistent differences between the Bradford and Lowry assays with respect to soluble tissue samples.) Accordingly we have reassayed our samples using the Lowry protein assay. The values are as follows: in normal skin calmodulin activity is $0.74 \pm 0.14 \, \mu g \, \text{calmodulin} \, mg^{-1} \, \text{epidermal protein} \, \text{(mean \pm SEM, n = 13 volunteers)}$, in psoriatic plaque $2.29 \pm 0.38 \, (n = 36 \, \text{patients})$, and in uninvolved epidermis $1.26 \pm 0.26 \, (n = 35)$. The overall conclusion that calmodulin is elevated in psoriatic epidermis stands ($p < 0.005$ by Mann-Whitney U test) but values in the uninvolved epidermis are only slightly (and not significantly) higher than in control epidermis.

The levels of calmodulin we now calculate to be present in psoriatic epidermis are consistent with the levels reported for several neoplastic tissues and transformed cells.

We wish to apologize for unwittingly publishing inaccurate data and would suggest that the Coomassie Brilliant Blue assay, which is becoming increasingly popular because of its speed, is not suitable for all protein samples.

Sheila Mac Neil, B.Sc., Ph.D.
William F. G. Tucker, M.B., M.R.C.P.
The University of Sheffield
Sheffield, U.K.